文件编号：中性 SF-560　　成品尺寸:95*150mm,采用128g双铜印刷,骑马钉装订

Digital DVBS2+T2 Finder

USER'S MANUAL

Main Menu
Terrestrial
Combo S2·T2 Meter
POWER
13V/18V
22K
LOCK

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Brief introduction:

This type of digital satellite finder is a simple and convenient instrument to install and adjust satellite dish. As digital satellite finder, it is necessary to input corresponding satellite parameters, such as LO frequency of LNB, Down Frequency, symbol rate, etc.

It can be used as an indicator to adjust satellite dish, feedhorn position and polarizing angle so that help the best dish installation.

1. Safety precautions

- Please read this user's guide carefully, especially for the first time users.
- Do not touch the LCD display by hand.
- Do not place heavy items on the device.
- Keep this unit away from the heat, direct sunlight, strong mechanical vibration, or dusty places. Clean the surface with a dry and soft cloth. Do not pour any liquid to void serious injury.
- Keep the unit in a ventilated place.
- Please contact your supplier if any failure occurs.
- Operate properly per this user's guide, otherwise any damage of the unit is at the user's risk.
- Specifications are subject to change and improvement without notice. Please inquire of manufacturer if there's any need after the usage.

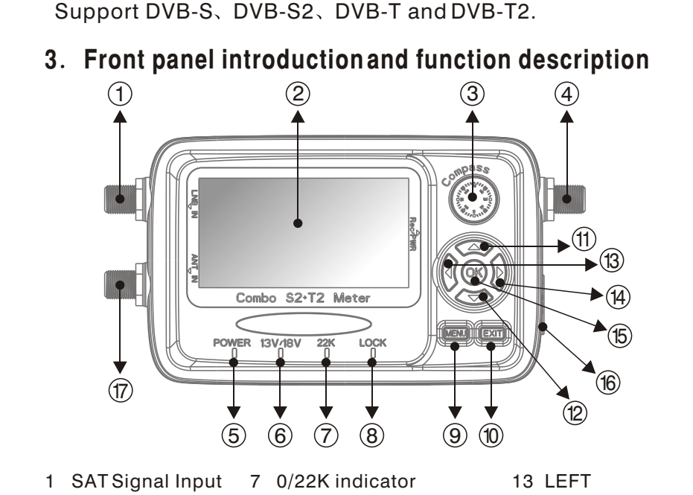
• Attention:

1. The unit is powered by external power supply or receiver.
2. Before connection is confirmed, keep equipment power off.
3. If short circuit happens when connecting cable, the screen will show "satellite signal input short circuit!" or "Terrestrial signal input short circuit! Please power off!", please check and remove the problem.

2. Main features

Edit transponder, down frequency, LO frequency of LNB, symbol rate, etc.
Find satellite signal and antenna signal accurately and simply.
Provide spectrum display.
Support 0/22KHz.
Support DISEqC1.0 switch.
Support USALS.
Support 0/5V.
Update data through USB.
Use LCD to display the satellite signal and antenna signal strength and quality.
Support DVB-S、DVB-S2、DVB-T and DVB-T2.

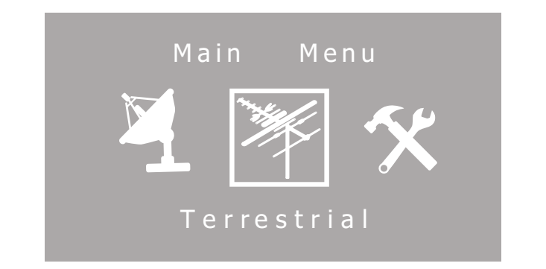
3. Front panel introduction and function description



1	SAT Signal Input	7	0/22K indicator	13	LEFT
2	LCD display	8	Signal locked indicator	14	RIGHT
3	Compass	9	Menu	15	OK
4	DC input	10	EXIT	16	USB port
5	Power indicator	11	UP	17	ANT Signal Input
6	13V/18V indicator	12	DOWN		

4. Main menu operation description

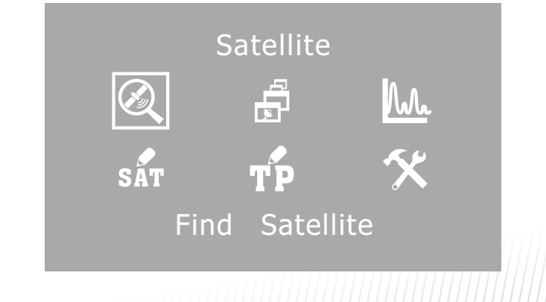
When power on, the screen will display some information about software, then enter to the main menu.



1. Press UP、DOWN、 LEFT or RIGHT to select submenu, press OK to enter.

4.1 Satellite

This menu is about operation of satellite.

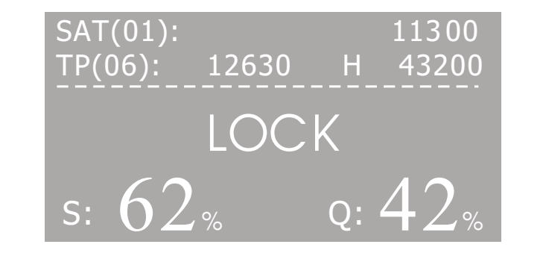


4.1.1 Find Satellite

· Function

It provides the users quick search for satellite signal, signal strength and quality display, parameters setting.

· Operation



```
SAT(01):                 11300
TP(06):   12630   H   43200
            LOCK
S: 62%             Q: 42%
```

1. Press UP or DOWN to select different setting item, then press LEFT or RIGHT to change setting of selected item
2. If need to input digit of selected parameter, press OK to enter, press LEFT or RIGHT to select digit position, then press UP or DOWN to modify the digit of parameter, press EXIT to exit the item after setting.
3. When parameter settings are confirmed and signal is ready, signal level and quality(S: Q:) will display correspond ing value, otherwise adjust antenna dish to get the highest signal level and quality readings.
4. Press EXIT to exit the current menu.

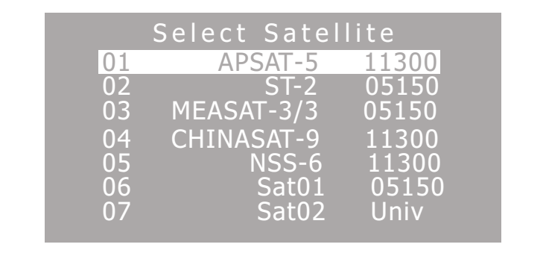
4.1.2 List satellite

· Function

This menu shows user all the satellite information, satellite para meters, signal strength and quality. Satellites are shown in list makes user to view and operate conveniently.

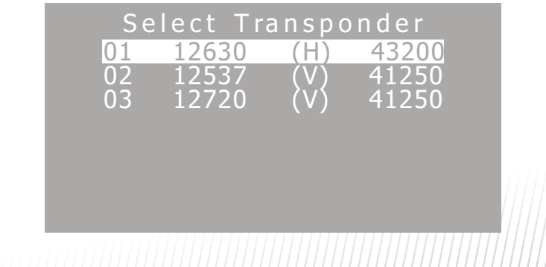
· Operation

List satellite (As below)



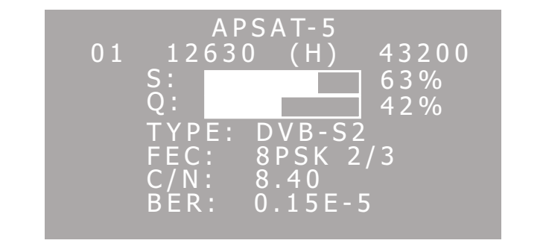
```
    Select Satellite
01       APSAT-5   11300
02          ST-2   05150
03   MEASAT-3/3    05150
04   CHINASAT-9    11300
05         NSS-6   11300
06         Sat01    05150
07         Sat02    Univ
```

1. Press UP or DOWN to select the desired satellite, press OK to show transponder frequency contained in this satellite.(As below)



```
  Select Transponder
01   12630   (H)   43200
02   12537   (V)   41250
03   12720   (V)   41250
```

2. Press UP or DOWN to select the desired frequency, press LEFT or RIGHT to turn page, press OK to show the satellite name, frequency, signal intensity and quality, (As below)



```
         APSAT-5
01   12630  (H)   43200
       S:            63%
       Q:            42%
       TYPE:  DVB-S2
       FEC:   8PSK 2/3
       C/N:   8.40
       BER:   0.15E-5
```

When the signal is locked, it will show current signal type, FEC, C/N and BER.

- Press UP or DOWN to change satellite
- Press LEFT or RIGHT to change transponder

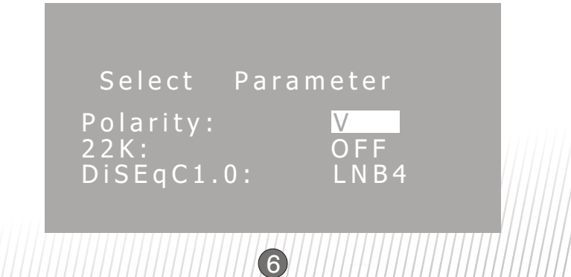
3. Press EXIT to exit the current menu

4.1.3 Display Spectrum

· Function

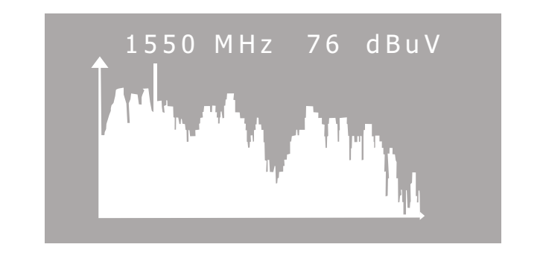
User can see signal spectrum clearly by selecting corresponding parameters in this menu.

· Operation



```
 Select    Parameter
Polarity:        V
22K:             OFF
DiSEqC1.0:       LNB4
```

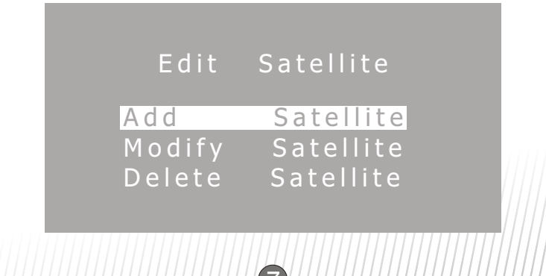
1. Press UP or DOWN to select different item, then press LEFT or RIGHT to change setting of selected item.
2. After selecting the appropriate parameters, press OK to enter spectrum display.



3. Press LEFT or RIGHT to move cursor slowly, press UP or DOWN to move quickly, current frequency and signal strength are shown on the top.
4. Press EXIT to exit the current menu.

4.1.4 Edit satellite

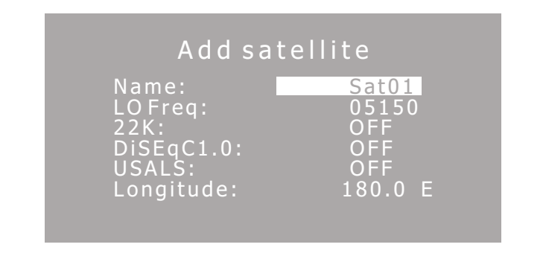
User can add, modify or delete satellites in this menu, and set up satellite name, LO frequency, 22KHz、DiSEqC1.0、USALS and satellite longitude according to self requirements.



```
   Edit    Satellite
Add        Satellite
Modify     Satellite
Delete     Satellite
```

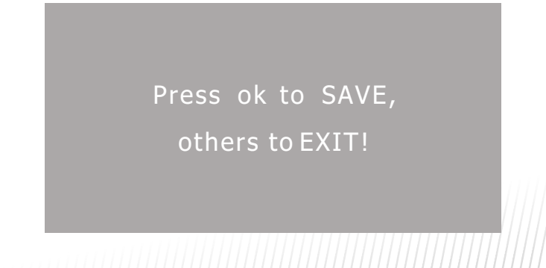
1. Add Satellite

Move cursor to "Add Satellite" and press OK, then you can enter the "Add Satellite" interface.(As below)



```
      Add satellite
Name:             Sat01
LO Freq:          05150
22K:              OFF
DiSEqC1.0:        OFF
USALS:            OFF
Longitude:        180.0 E
```

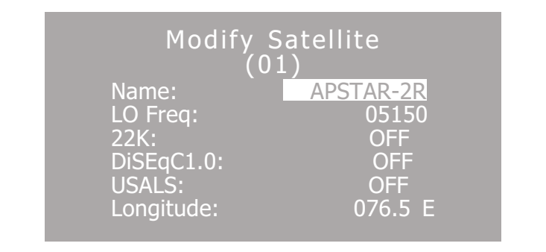
① Press UP or DOWN to select different setting item, then press LEFT or RIGHT to change setting of selected item.
② If need to input satellite name or digit of select parameter, press OK to enter, press LEFT or RIGHT to select character or digit position, then press UP or DOWN to modify, press EXIT to exit the item after setting.
③ When adding satellite completed, press EXIT to exit the menu and operate according to the prompts. (As below)



```
Press ok to SAVE,
others to EXIT!
```

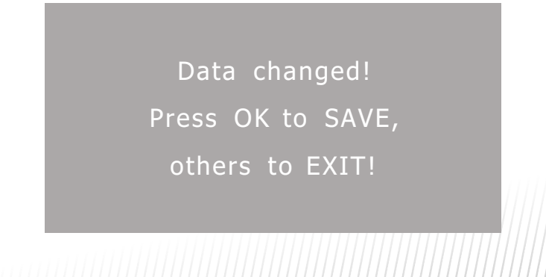
2. Modify Satellite

Move cursor to "Modify Satellite" and press OK, then you can enter the "Modify Satellite" interface. (As below)



```
    Modify Satellite
         (01)
Name:          APSTAR-2R
LO Freq:           05150
22K:               OFF
DiSEqC1.0:         OFF
USALS:             OFF
Longitude:         076.5 E
```

① Press UP or DOWN to select different modify item, then press LEFT or RIGHT to change setting of selected item.
② If need to modify satellite name or digit of selected parameter, press OK to enter, press LEFT or RIGHT to select character or digit position, then press UP or DOWN to modify, press EXIT to exit the item after modify.
③ When modify satellite completed, press EXIT to exit the menu and operate according to the prompts. (As below)



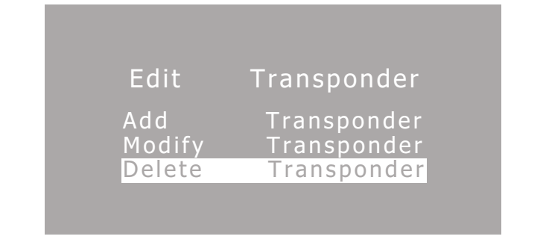
```
Data changed!
Press OK to SAVE,
others to EXIT!
```

3. Delete Satellite

If need to delete satellite, enter "Delete Satellite" item, press UP or DOWN to select the satellite you want to delete, and press OK to confirm, then press OK to delete the satellite or press others key to exit.

4.1.5 Edit transponder

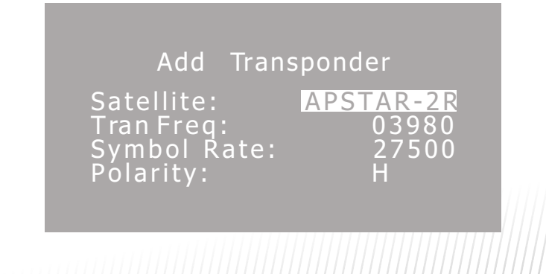
User can add, modify or delete transponders in this menu.



```
   Edit     Transponder
Add         Transponder
Modify      Transponder
Delete      Transponder
```

1. Add Transponder

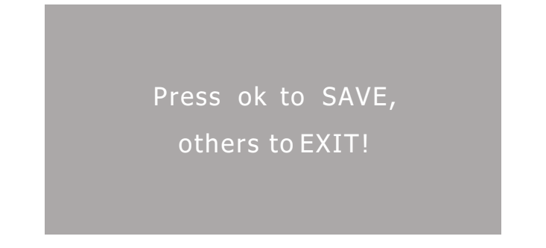
Press OK on "Add Transponder" to enter the item. (As below)



```
   Add  Transponder
Satellite:     APSTAR-2R
Tran Freq:         03980
Symbol Rate:       27500
Polarity:          H
```

① Satellite: Press LEFT or RIGHT to select a existing satellite
② Tran Freq: Set up the transponder frequency, press OK to enter edit mode, then use LEFT/RIGHT/UP/DOWN to set the digit, EXIT to exit the setup of the item.
③ Symbol Rate: Symbol rate of current transponder. Set up method as shown above.
④ Polarity: Vertical or Horizontal polarization.

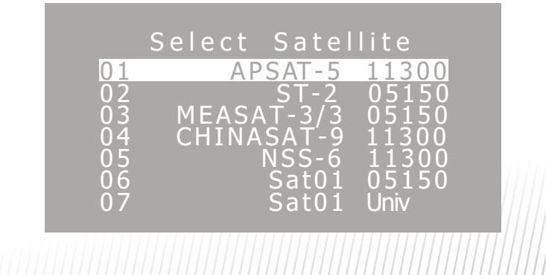
When complete adding transponder, press EXIT to exit the menu and operate according to the prompts. (As below)



```
Press ok to SAVE,
others to EXIT!
```

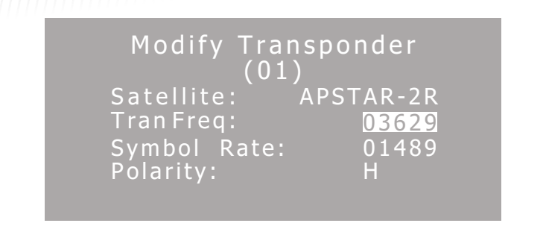
2. Modify Transponder

Press OK on "Modify Transponder" to enter the item.(As below)



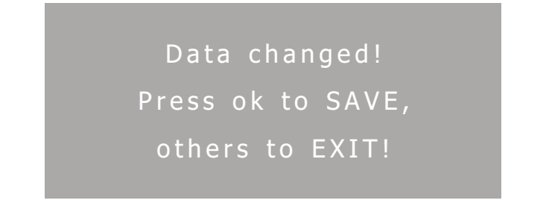
```
   Select  Satellite
01      APSAT-5  11300
02         ST-2  05150
03   MEASAT-3/3  05150
04   CHINASAT-9  11300
05        NSS-6  11300
06        Sat01  05150
07        Sat01  Univ
```

Use UP/DOWN/LEFT/RIGHT to move cursor to a satellite, then press OK to enter the transponder edit screen.



```
   Modify Transponder
         (01)
Satellite:     APSTAR-2R
Tran Freq:         03629
Symbol Rate:       01489
Polarity:          H
```

When complete modifying transponder, press EXIT to exit the menu and operate according to the prompts. (As below)

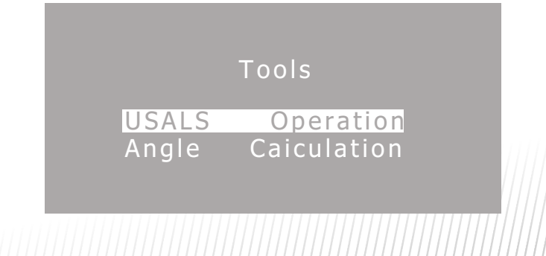


```
Data changed!
Press ok to SAVE,
others to EXIT!
```

3. Delete Transponder

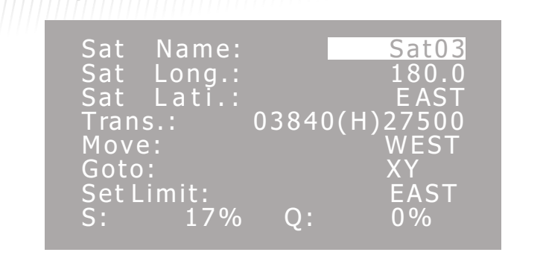
This function let you to delete the existing transponders that you want to delete.

4.1.6 Tools



```
        Tools
USALS    Operation
Angle    Caiculation
```

1. USALS operation

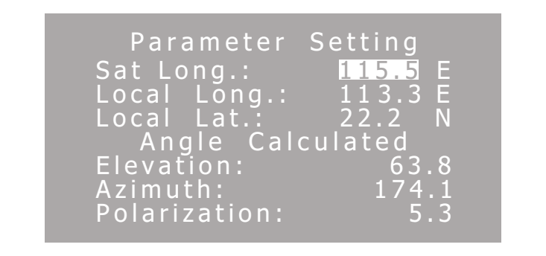


```
Sat  Name:          Sat03
Sat  Long.:         180.0
Sat  Lati.:          EAST
Trans.:       03840(H)27500
Move:                WEST
Goto:                XY
Set Limit:           EAST
S:      17%   Q:     0%
```

Sat.: Select a satellite (the satellite's USALS must be set to "ON")
Sat Long.: Satellite longitude
Sat Dir.: Satellite direction
Trans.: Select a transponder.
Move: To drive the motor to rotate dish antenna, press LEFT or RIGHT to select east or west, press OK once will rotate one step, press and hold will rotate continuously.
Goto: To rotate to the target automatically, press LEFT or RIGHT to select "XX" or "ZERO". When select "XX" and press OK, the motor will rotate dish antenna to corresponding satellite automatically. When select "ZERO" and press OK will rotate to "0" scale.
Note: Before use "Goto" function, it is need to input local longitude and latitude in Calculate Angle submenu.
Set Limit: To set rotation limit, press LEFT or RIGHT to select east, west or clear limit. E.g. rotate motor to an east direction angle, then select "EAST" and press OK, this angle location will be EAST rotation limit, motor will not be able to rotate over this east limit. Select "CLEAR" to cancel limit.

2. Angle Calculation

The function can calculate antenna elevation, azimuth and LNB polarization angle according to satellite longitude, local location longitude and latitude parameter settings, it is useful for receiving installation.

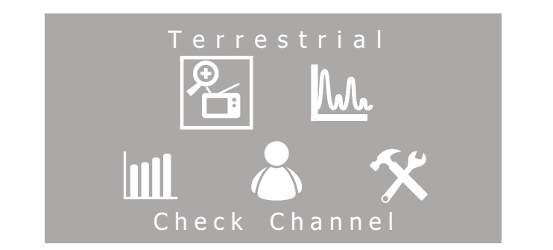


```
  Parameter  Setting
Sat Long.:       115.5 E
Local  Long.:    113.3 E
Local  Lat.:     22.2  N
   Angle  Calculated
Elevation:          63.8
Azimuth:           174.1
Polarization:        5.3
```

1. Press UP or DOWN to move to the numeric parameter and press OK to enter, press LEFT or RIGHT to select digit position, then press UP or DOWN to set the digit, press EXIT to exit current setting.
2. The letter "E", "W", "N" and "S" means east longitude, west longitude, north hemisphere and south hemisphere respectively. When move to the letter, it can be set by press LEFT or RIGHT.
3. The angle data can be calculated and displayed automatically when parameter is being set. Elevation angle is counted from horizon upward, azimuth angle is from north clockwise.
4. Press "EXIT" button to exit the menu.

4.2 Terrestrial

This menu is about operation of Terrestrial signal.

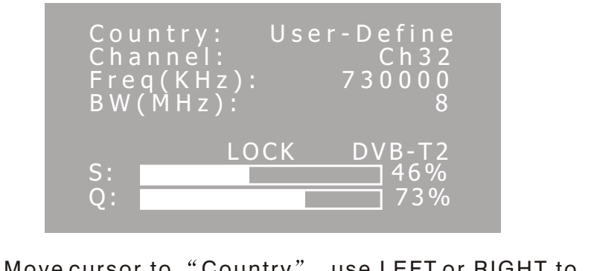


4.2.1 Check Channel

● Function

It provides the users quick search for terrestrial signal, signal strength and quality display, parameters setting.

● Operation

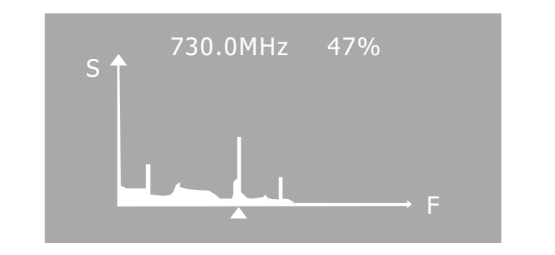


```
Country:    User-Define
Channel:           Ch32
Freq(KHz):       730000
BW(MHz):              8
           LOCK    DVB-T2
S:                  46%
Q:                  73%
```

Move cursor to "Country", use LEFT or RIGHT to change between user-defined data or the country that selected in "Select Parameter" menu. If select "User-Define", user can input desired frequency and select different BW (number: 6-8). Move to "Channel" to select a channel.
Press EXIT to exit current menu.

4.2.2 Analyze Spectrum

The function shows the terrestrial signal spectrum.

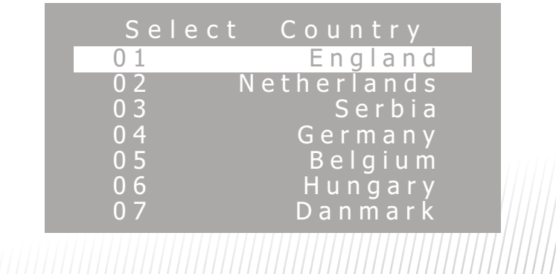


This diagram displays the signal strength of the channel that contained in the "Define User Data" or selected country, change it in "Check Channel" menu.

Press LEFT or RIGHT to move cursor slowly, press UP or DOWN to move quickly, current frequency and signal strength are shown on the top

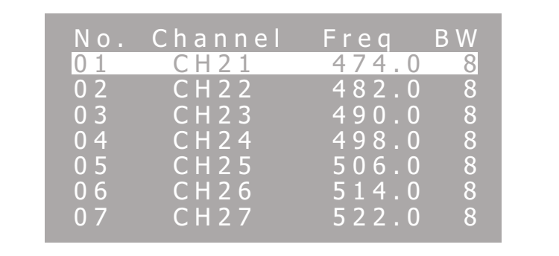
4.2.3 List Channel

The function can show all channels by country. It offers the convenience of check and operation.



```
  Select    Country
01          England
02      Netherlands
03           Serbia
04          Germany
05          Belgium
06          Hungary
07          Danmark
```

1. Press UP or DOWN button to move cursor, press LEFT or RIGHT button to change page, press OK to enter the channel list of the selected country as following.



```
No.  Channel   Freq   BW
01    CH21    474.0   8
02    CH22    482.0   8
03    CH23    490.0   8
04    CH24    498.0   8
05    CH25    506.0   8
06    CH26    514.0   8
07    CH27    522.0   8
```

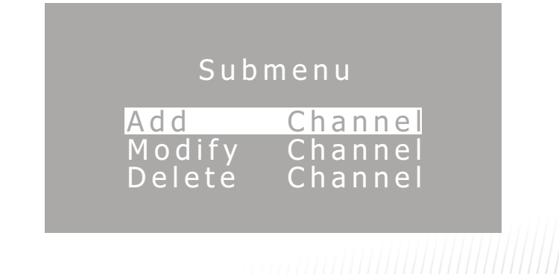
4.2.4 Define User Data

●Function

In this menu, user can add, modify or delete channels.

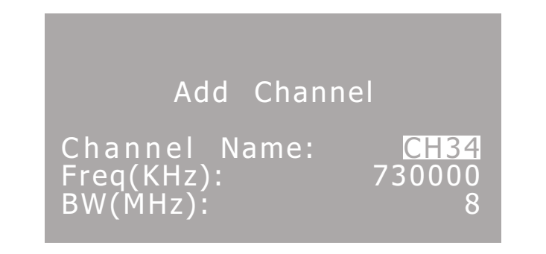
●Operation

Enter the "Define User Data" menu (As following).

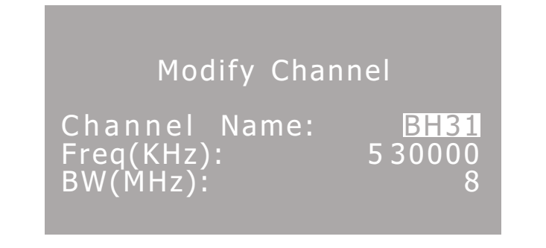


```
      Submenu
Add       Channel
Modify    Channel
Delete    Channel
```

1. Select the desired function and enter. In the "Add Channel" and "Modify Channel" function, user can modify channel name, frequency and bandwidth.

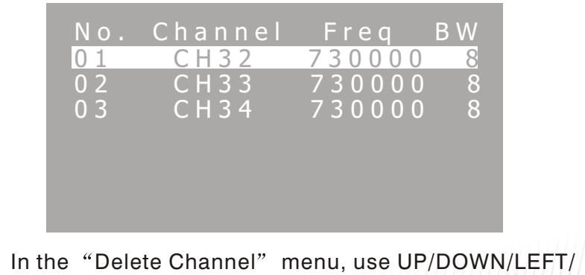


```
      Add  Channel
Channel  Name:     CH34
Freq(KHz):       730000
BW(MHz):              8
```



```
    Modify  Channel
Channel  Name:     BH31
Freq(KHz):       530000
BW(MHz):              8
```

The data will save when user finish editing and press EXIT.

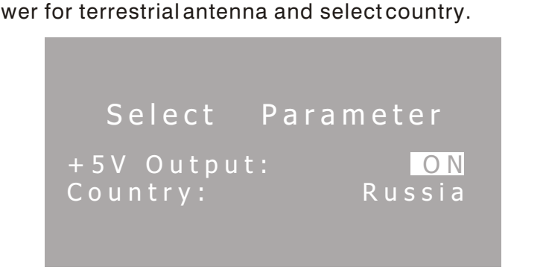


```
No.  Channel   Freq    BW
01    CH32    730000   8
02    CH33    730000   8
03    CH34    730000   8
```

In the "Delete Channel" menu, use UP/DOWN/LEFT/RIGHT to select a channel, press OK to delete the selected channel, press EXIT to exit.

4.2.5 Select Parameter

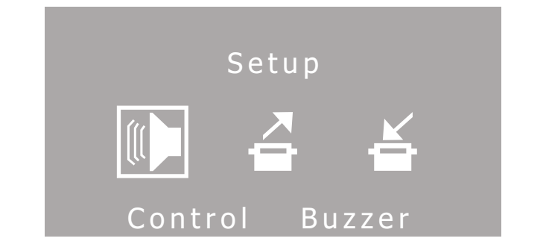
In this menu, user can turn on or turn off the 5V output power for terrestrial antenna and select country.



```
 Select    Parameter
+5V Output:        ON
Country:       Russia
```

4.3 Setup

In this menu user can set buzzer and manage user data



4.3.1 Control Buzzer

Set the buzzer to on or off state.

4.3.2 Backup Data

You can back up satellite data to U disk by this menu.

4.3.3 Update Data

You can update satellite data from U disk by this menu.

Note: Only the "txt" format file which named "sf560" can be identified, and must write as below. (There is a blank line at last)

```
2014-9-2 13:50:29
sf560
01 01 00CHina6B 05150 00 0 115.50
001 001 01 03951 09520 1
001 002 01 03880 27500 0
01 02 Koreasat5 11300 10 0 113.00
001 003 02 12647 28000 1
01 03 0000NSS11 Univ  00 0 108.20
001 004 03 12537 41250 1
```

```
01  01  00China 6B  05150  0  0  0  115.5  0
 ↓   ↓       ↓        ↓    ↓  ↓  ↓    ↓    ↓
 ①   ②       ③        ④    ⑤  ⑥  ⑦    ⑧    ⑨
```

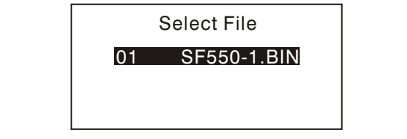
① "01" means this line information is about satellite.
② The serial number of the satellite, it must be continuous, can not from "01" to "03".
③ Satellite name. The length is ten. If the name of the satellite is sat01, the third must be "00000sat01".
④ The LO Freq of the satellite.
⑤ Represent 22KHz signal status. "0" means OFF, "1" means ON.
⑥ Represent DiSEqC1.0 status. "0" means OFF, "1" means LNB1, "2" means LNB2, "3" means LNB3, "4" means LNB4.
⑦ Represent USALS status, "0" means USALS OFF, "1" means USALS ON.
⑧ Satellite Longitude.
⑨ Satellite location. "0" means east, "1" means west.

```
001  001  01  03951  09520  1
 ↓    ↓    ↓    ↓      ↓    ↓
 ❶    ❷    ❸    ❹      ❺    ❻
```

❶ "001" means this line information is about TP.
❷ The serial number of the TP, it must be continuous, can not from "01" to "03".
❸ The number means this TP is belong to which satellite have the same number..
❹ Transponder frequency
❺ Symbol Rate.
❻ Polarity. "0" means H, "1" means V.

5、Update application system

The product can update application system from USB port, if you want to update application system, insert U disk, press MENU and connect power supply until the screen display as below.



```
    Select File
01    SF560-1.BIN
```

Press "OK" to update .When the system is complete updating, the system will restart.

6、Technique specifications

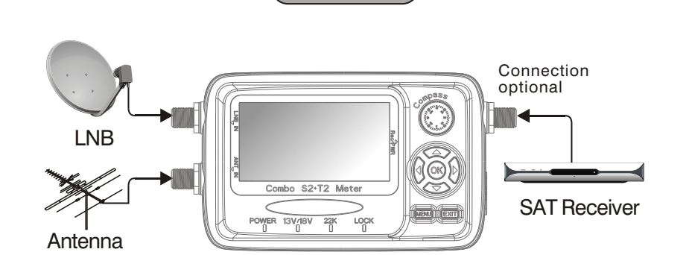
S2	Frequency range	950~2150MHz
	Signal Level	-65 ~ -25dBm
	Impedance	75Ω
	Symbol rate	1Msps~60Msps
	Demodulation	DVB-S: QPSK DVB-S2: 8PSK,16APSK,32APSK
	22KHz Tone	Supported
	DiSEqC1.0	Supported
	USALS	Supported
T2	Frequency range	170 ~ 230MHz (VHF) 470 ~ 862MHz (UHF)
	Impedance	75Ω
	Signal Level	-78 ~ -10dBm
	Demodulation Scheme	DVB-T:QPSK,16QAM,64QAM DVB-T2: 16QAM,64QAM,256QAM
	Bandwidth	6MHz、7MHz、8MHz
Power supply	Switching Power input	AC110~240V 50Hz/60Hz
	Switching Power output	18V DC 1000mA
Others	Connector	F type
	USB port	Supported
	Operation temperature	-10℃ ~ +50℃

7. Attachments:

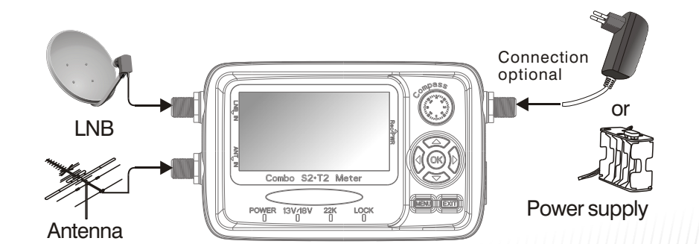
Power supply:	x 1
Instruction Manual:	x 1
F type connector:	x 1
F to TV connector:	x 2

8. Connection diagram

Diagram1



Cautions: Satellite receiver must have minimum 750mA LNB power output, otherwise connect LNB after satellite finder power on.

Diagram2